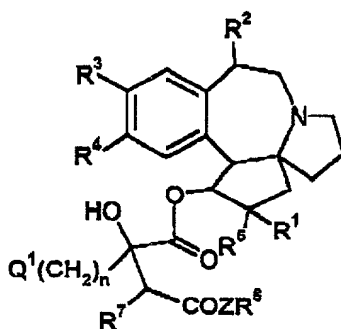


Claims

1. A new method of therapy using the subcutaneous mode of administration of formulations based upon harringtonines including their salts and tautomeric forms having the formula



15 where :

- R¹ is H, OH, OMe, O-(C₁-C₃₀)-alkyl, O-aryl-(C₁-C₃₀)-alkyl, O-(C₂-C₃₀)-alkenyl, O-(C₃-C₃₀)-cycloalkyl or null and

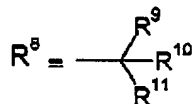
R² is H or OH, or R¹, R² form together -O-,

R³ = R⁴ = OMe or R³ and R⁴ form together -OCH₂O-,

-
- n is 0 to 8,
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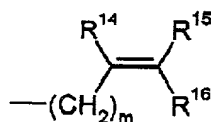
- 25 • R⁵ is H, OH, OMe, O-(C₁-C₃₀)-alkyl, O-aryl-(C₁-C₃₀)-alkyl, O-(C₂-C₃₀)-alkenyl, O-(C₃-C₃₀)-cycloalkyl or O-aryl,

Z = O, S, or NH, and



or Z- R⁸ is NR¹²R¹³, R¹² and R¹³ representing respectively R⁹ and R¹⁰,

R⁹, R¹⁰, R¹¹ are independently H, C₁-C₃₀ alkyl, C₃-C₃₀ cycloalkyl, aryl, aryl-(C₁-C₃₀)-alkyl, C₂-C₃₀ alkenyl, C₂-C₃₀ alkynyl, C₁-C₃₀ trihalogenoalkyl, C₁-C₃₀ alkylamino-(C₁-C₃₀)alkyl, C₁-C₃₀ dialkylamino-(C₁-C₃₀)-alkyl, or amino-(C₁-C₃₀)-alkyl, or

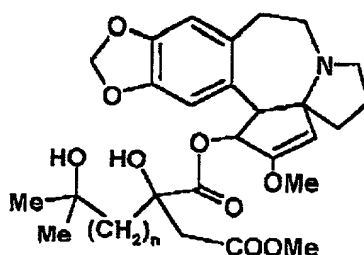


where R¹⁴, R¹⁵, R¹⁶ are independently H, halogen, C₁-C₃₀ alkyl, C₃-C₃₀ cycloalkyl, aryl, aryl-(C₁-C₃₀)-alkyl, C₂-C₃₀ alkenyl or C₂-C₃₀ alkynyl, C₁-C₃₀ trihalogenoalkyl, m is 0 to 4,

each of these groups including or not heteroatom(s).

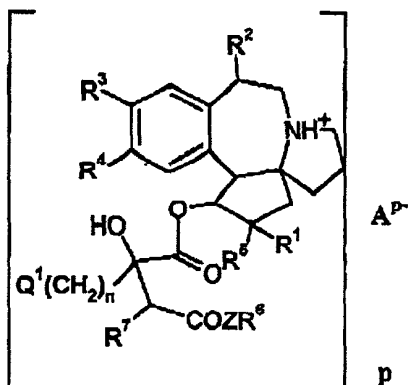
or their combination with another antitumor agent or a mixture of antitumor agents useful for the treatment of a disease in humans or animals, particularly cancers, leukemias, lymphomas, parasite diseases or chemotherapeutic resistance to other agents, in using a formulation specifically adapted for subcutaneous administration.

2. The method of claim 1 to 2 where the harringtonine is homoharringtonine or harringtonine having the following formula



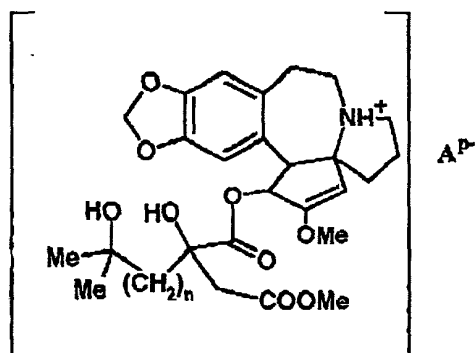
where n = 1 or 2

3. The method of claim 1 or 2 in which harringtonines are used under their salt forms having the following formula,



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or, in particular the formula



where A⁻ is a mineral anion such as chlorid, sulfate, nitrate, perchlorate or an organic ion such as tartarate, malate, lactate, or a citrate and p is 1 or 2.

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4. The method of claims 1 to 3 in which the acid which forms a salt of harringtonines is hydrochlorid acid or tartaric acid.

5. The method of therapy of claims 1 to 4 in which the harringtonines are solution or hydrophilic freeze-dried powder ready-to-reconstitute of buffered salt of homoharringtonine or harringtonine of which the level of chromatographic purity suitable for medical use is higher than 99.7 %

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6. The method of therapy of claims 3 to 5 in which the pH of the formulation or constituted solution for injection is included between 5.5 and 8.

7. The method of therapy of claims 1 to 6 in which harringtonines are combined with another agent in the same injection.

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8. The method of therapy of claim 7 in which the other agent is a nucleoside, preferably cytosine arabinoside

9. The method of therapy of claims 1 to 8 in which the subcutaneous mode of administration is performed by bolus injection at regular intervals such as one to four injection a day during 1 to n days for a cycle of n days, n being preferably 28.

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10. The method of therapy of claims 1 to 8 in which the subcutaneous mode of administration is performed by continuous subcutaneous infusion.

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